



SDI Review Form 1.6

Journal Name:	Annual Research & Review in Biology
Manuscript Number:	2013_ARRB_7229
Title of the Manuscript:	Initial insight to effect of exercise on maximum pressure in the aortic root using 2D fluid-structure interaction model
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Compulsory REVISION comments	<ol style="list-style-type: none"> 1) Very poorly written. There are several grammar mistakes and the sentences are confusing. The authors fail to explain their view clearly. 2) In the title, authors say about the aortic root pressure while the manuscript describes about the left ventricular pressure. Do you want to relate them in any way? 3) Only one patient in the study? Publishing data from one patient is not recommended. 4) How did you employ the mesh? Invasive procedure is not well explained in the methods. 5) Separate the results from the methods section 6) Is the pressure variations observed are significant? Again its only one patient and even it's not worth to apply statistics 7) Explain the clinical significance in detail 8) Overall, this is a very poor manuscript- badly 	<ol style="list-style-type: none"> 1) The grammatical mistakes were corrected. The clarifications were added to abstract, study finding of discussion and conclusion which were highlighted. 2) The title was amended 3) To our knowledge this is the first time that a fluid-structure interaction model has been combined with exercise measurements to make numerical predictions of MPLV. Our current study is novel as it demonstrates the feasibility of measuring a range of exercise induced boundary conditions and applying them to a computational model developed from measurements taken from the individual. Our fluid-structure interaction modelling has required development of computational methods to numerically predict MPLV. We have amended the manuscript to clarify the novelty of our research (please see lines 214, 317, 345 and conclusion section of abstract). 4) This was explained in detail in ref [27], but we added some details briefly (see line 123) 5) The authors believe that they are separated. The workflow diagram provided in newly added figure 1 clarifies that to a good extent.



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	written and authors failed to isolate the clinical impact of their method firmly by not using multiple subjects.	6) In our previous study [27], Unlike many computational studies, we validated our model with real measurements. Well gained correlation factors using linear correlation, showed trustiness of our measurements [27]. It is also should be noted that Atherosclerosis research center, Tehran, Iran (line 85) approved the healthy situation of the subject. Please see attached ref 27. 7) That was noted in section 4.2. 8) Grammatical mistakes were corrected and all changes were highlighted.
Minor REVISION comments		
Optional/General comments		